

ABSTRACT OF THE DISCLOSURE

A polymeric composition having antimicrobial properties and a process for rendering the surface of a substrate antimicrobial are disclosed. The polymeric composition comprises a crosslinked chemical combination of (i) a polymer having amino group-containing side chains along a backbone forming the 5 polymer, (ii) an antimicrobial agent selected from metals, metal alloys, metal salts, metal complexes and mixtures thereof, and (iii) a crosslinking agent containing functional groups capable of reacting with the amino groups. In one example embodiment, the polymer is a polyamide formed from a maleic anhydride or maleic acid ester monomer and alkylamines thereby producing a polyamide 10 having amino substituted alkyl chains on one side of the polyamide backbone; the crosslinking agent is a phosphine having the general formula $(A)_3P$ wherein A is hydroxyalkyl; and the metallic antimicrobial agent is selected from chelated silver ions, silver metal, chelated copper ions, copper metal, chelated zinc ions, zinc metal and mixtures thereof.

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